APPENDIX H
BIOLOGICAL RESOURCES FORMS

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APPENDIX H1

WETLAND DETERMINATION FORMS

Routine Wetland Determination

DATA FORM 1 *(Revised)*

Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual)

Project/Site: Reliant Colusa Applicant/owner: Investigator(s): S. Leach, J. Stead, C. Lu	Date: 3-26-01 County: Colusa State: CA S/T/R:
Do normal circumstances exist on the site? ☒ Yes ☐ No Is the site significantly disturbed (atypical situation)? ☐ Yes ☒ No Is the area a potential problem area? ☒ Yes ☐ No Explanation of atypical or problem area: seasonal hydrology	Community ID: Transect ID: Plot ID: A-1

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

	Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
d	Brassica nigra	H	15%	NI				
	Geranium dissectum	H	5%	NI				
d	Hordeum marinum ssp.	H	40%	FAC				
d	Senecio vulgaris	H	10%	NI*				
	Medicago polymorpha	H	5%	FAC				
	Capsella bursa pastoris	H	1%	FAC-				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 33%

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☒ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☐ Yes ☒ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☒ Yes ☐ No	Water Marks: ☐ Yes ☒ No on	Sediment Deposits: ☐ Yes ☒ No
Based on: ☐ Soil temp (record temp) ☐ Other (explain)	Drift Lines: ☐ Yes ☒ No	Drainage Patterns: ☒ Yes ☐ No
Depth of inundation: dry inches	Oxidized Root (live roots) Channels <12in.: ☐ Yes ☐ No	Local Soil Survey: ☐ Yes ☐ No
Depth to free water in pit: inches	FAC Neutral: ☐ Yes ☒ No	Water-stained Leaves: ☐ Yes ☐ No
Depth to saturated soil: inches		
Check all that apply & explain below: ☐ Stream, lake or gage data ☐ Aerial photographs ☐ Other	Other (explain): Cattle hoof prints 3-5" deep indicate seasonal saturation.	

Wetland hydrology present? ☐ Yes ☒ No

Rationale for decision/remarks:

SOILS

Map Unit Name (Series and Phase) :

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0 – 6"+	A	10YR 2/2	none	none	silty-clay	

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☐ Yes ☒ No

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☐ Yes	☒ No
Hydric soils present?	☐ Yes	☒ No
Wetland hydrology present?	☐ Yes	☒ No
Is the sampling point within a wetland?	☐ Yes	☒ No

Rationale/Remarks:

NOTES:

Revised 4/97

Routine Wetland Determination

DATA FORM 1 *(Revised)*

Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual)

Project/Site: Deliant Energy	Date: 3/26/01
Applicant/owner:	County: Colusa
Investigator(s): C. Lu, J. Stead, S. Leach	State: CA
	S/T/R:
Do normal circumstances exist on the site? [X] Yes [ ] No	Community ID: A-2
Is the site significantly disturbed (atypical situation)? [ ] Yes [X] No	Transect ID:
Is the area a potential problem area? [X] Yes [X] No	Plot ID:
Explanation of atypical or problem area: grazing area, seasonal hydrology	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Hordeum marinum	H	85	FAC				
~~Sole tatos~~		[illegible]					
Senecio vulgaris	H	10	NI				
Melilotus polymorpha	H	75	NL				
~~Shepard's purse~~ Capsella bursa-pastoris	H	75	FAC-				
Geranium disertum	H	75	NI				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 85

Check all indicators that apply and explain below:

- [ ] Visual observation of plant species growing in areas of prolonged inundation/saturation
- [ ] Morphological adaptations
- [X] Technical Literature
- [ ] Physiological/reproductive adaptations
- [ ] Wetland plant database
- [ ] Personal knowledge of regional plant communities
- [ ] Other (explain)

Hydrophytic vegetation present? [X] Yes [ ] No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? [X] Yes [ ] No	Water Marks: [X] Yes [X] No on	Sediment Deposits: [X] Yes [X] No
Based on: [ ] Soil temp (record temp) [ ] Other (explain)	Drift Lines: [ ] Yes [X] No	Drainage Patterns: [X] Yes [ ] No
Depth of inundation: Ø inches	Oxidized Root (live roots) Channels <12 in.: [X] Yes [ ] No	Local Soil Survey: [ ] Yes [ ] No
Depth to free water in pit: Ø inches	FAC Neutral: [ ] Yes [X] No	Water-stained Leaves: [ ] Yes [X] No
Depth to saturated soil: Ø inches		
Check all that apply & explain below: [ ] Stream, lake or gage data [ ] Aerial photographs [ ] Other	Other (explain): The site is at the bottom of a swale that collects water. The ~~site~~ scale is not very pronounced cattle hoofprints 3"-5" deep.	

Wetland hydrology present? [X] **Yes** [ ] **No**

Rationale for decision/remarks:

SOILS

Map Unit Name (Series and Phase) : Cupay clay loam

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup) 0-1% slope

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
12"	A	10YR 3/2			barely noticeable oxidized root channel	

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☐ Yes ☒ No

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☒ Yes	☐ No
Hydric soils present?	☐ Yes	☒ No
Wetland hydrology present?	☒ Yes	☐ No
Is the sampling point within a wetland?	☐ Yes	☒ No

Rationale/Remarks:

NOTES:

Revised 4/97

Routine Wetland Determination

DATA FORM 1 *(Revised)*

Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual)

Project/Site: Reliant - Colusa Applicant/owner: Investigator(s): S. Leach, J. Stead, C. Lu	Date: 3-26-01 County: Colusa State: CA S/T/R:
Do normal circumstances exist on the site? ☒ Yes ☐ No Is the site significantly disturbed (atypical situation)? ☐ Yes ☒ No Is the area a potential problem area? ☒ Yes ☐ No Explanation of atypical or problem area: seasonal hydrology	Community ID: Transect ID: Plot ID: B-1

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
d Hordeum marinum	H	70%	FAC				
Lepidium nitidum	H	3%	NI				
Cerastium	H	5%	FAC				
Plantago elongata	H	3%	FACW				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 93%

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☒ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☒ Yes ☐ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☒ Yes ☐ No	Water Marks: ☐ Yes ☒ No on	Sediment Deposits: ☐ Yes ☒ No
Based on: ☐ Soil temp (record temp) ☐ Other (explain)	Drift Lines: ☐ Yes ☒ No	Drainage Patterns: ☒ Yes ☐ No
Depth of inundation: none inches	Oxidized Root (live roots) Channels <12in: ☐ Yes ☐ No	Local Soil Survey: ☐ Yes ☐ No
Depth to free water in pit: inches	FAC Neutral: ☐ Yes ☒ No	Water-stained Leaves: ☐ Yes ☒ No
Depth to saturated soil: inches		
Check all that apply & explain below: ☐ Stream, lake or gage data ☐ Aerial photographs ☐ Other	Other (explain):	

Wetland hydrology present? ☐ Yes ☒ No

Rationale for decision/remarks: sample point is located in shallow, low-gradient swale.

SOILS

Map Unit Name (Series and Phase) :

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-9"+	A	10YR 3/2	none	none	silty-clay	

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☐ Yes ☒ No

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☒ Yes	☐ No
Hydric soils present?	☐ Yes	☒ No
Wetland hydrology present?	☐ Yes	☒ No
Is the sampling point within a wetland?	☐ Yes	☒ No

Rationale/Remarks:

NOTES:

Revised 4/97

Routine Wetland Determination

DATA FORM 1 *(Revised)*

Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual)

Project/Site: Colusa - reliant Applicant/owner: Investigator(s): S. Lead, C. Lu, J. Stead	Date: 3-26-01 County: Colusa State: CA S/T/R:
Do normal circumstances exist on the site? ☒ Yes ☐ No Is the site significantly disturbed (atypical situation)? ☐ Yes ☒ No Is the area a potential problem area? ☒ Yes ☐ No Explanation of atypical or problem area: seas. hydrology	Community ID: Transect ID: Plot ID: B-2

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Hordeum marinum	50%	– H	FAC				
Brassica Nigra	30%	– H	NL				
Senatio vulgaris	19%	– H	NL				
Geranium dissectum	1%	– H	NI				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 50

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☒ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☒ Yes ☐ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☒ Yes ☐ No

Based on: ☐ Soil temp (record temp) ☐ Other (explain)

Depth of inundation: Ø inches	Water Marks: ☐ Yes ☒ No	Sediment Deposits: ☐ Yes ☒ No
Depth to free water in pit: Ø inches	Drift Lines: ☐ Yes ☒ No	Drainage Patterns: ☒ Yes ☐ No
Depth to saturated soil: Ø inches	Oxidized Root (live roots) Channels <12in: ☐ Yes ☐ No	Local Soil Survey: ☐ Yes ☐ No
	FAC Neutral: ☐ Yes ☒ No	Water-stained Leaves: ☐ Yes ☒ No

Check all that apply & explain below:

- ☐ Stream, lake or gage data
- ☐ Aerial photographs
- ☐ Other

Other (explain): Slight depression, hoof prints 2-3"

Wetland hydrology present? ☒ **Yes** ☐ **No**

Rationale for decision/remarks:

SOILS

Map Unit Name (Series and Phase) :

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-6"	A	10YR 3/2	none	—	silty clay	

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☐ **Yes** ☒ **No**

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☒ **Yes**	☐ **No**
Hydric soils present?	☐ **Yes**	☒ **No**
Wetland hydrology present?	☒ **Yes**	☐ **No**
Is the sampling point within a wetland?	☐ **Yes**	☒ **No**

Rationale/Remarks: The soils aren't hydric + the vegetation + hydrology is marginal.

NOTES:

Revised 4/97

Routine Wetland Determination

DATA FORM 1 *(Revised)*

Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual)

Project/Site: Reliant – Colusa	Date: 3-26-01
Applicant/owner:	County: Colusa
Investigator(s):	State: CA
	S/T/R:
Do normal circumstances exist on the site? ☒ Yes ☐ No	Community ID:
Is the site significantly disturbed (atypical situation)? ☐ Yes ☒ No	Transect ID:
Is the area a potential problem area? ☒ Yes ☐ No	Plot ID: B-3
Explanation of atypical or problem area: seasonal hydrology	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Bromus mollis	H	70%	NI				
Lepidium nitidum	H	30%	NI				
Plantago elongata	H	5%	FACW				
Medicago polymorpha	H	3%	NI				
Senecio vulgaris	H	1%	NI				
Lepidium latipes	H	1%	OBL				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC:

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☐ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☒ Yes ☒ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☒ Yes ☐ No	Water Marks: ☐ Yes ☒ No on	Sediment Deposits: ☐ Yes ☒ No
Based on: ☐ Soil temp (record temp) ☐ Other (explain)	Drift Lines: ☐ Yes ☒ No	Drainage Patterns: ☐ Yes ☒ No
Depth of inundation: none inches	Oxidized Root (live roots) Channels <12 in.: ☐ Yes ☒ No	Local Soil Survey: ☐ Yes ☒ No
Depth to free water in pit: none inches	FAC Neutral: ☐ Yes ☒ No	Water-stained Leaves: ☐ Yes ☐ No
Depth to saturated soil: none inches		
Check all that apply & explain below: ☐ Stream, lake or gage data ☐ Aerial photographs ☐ Other	Other (explain):	

Wetland hydrology present? ☐ Yes ☒ No

Rationale for decision/remarks:

SOILS

Map Unit Name (Series and Phase) :

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0 - 5½	A	10YR 3/2	none	—	silty loam	

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☐ Yes ☒ No

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☐ Yes	☒ No
Hydric soils present?	☐ Yes	☒ No
Wetland hydrology present?	☐ Yes	☒ No
Is the sampling point within a wetland?	☐ Yes	☒ No

Rationale/Remarks:

NOTES:

Revised 4/97

Routine Wetland Determination

DATA FORM 1 *(Revised)*

Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual)

Project/Site: Colusa - Reliant Applicant/owner: Investigator(s): S. Leach, J. Stead, C. Lu.	Date: 3-26-01 County: Colusa State: CA S/T/R:
Do normal circumstances exist on the site? ☒ Yes ☐ No Is the site significantly disturbed (atypical situation)? ☐ Yes ☒ No Is the area a potential problem area? ☐ Yes ☒ No Explanation of atypical or problem area:	Community ID: Transect ID: Plot ID: C-1

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Lolium multiflorum	H	90%	FAC				
Plagiobothrys stipitatus	H	5%	OBL				
Veronica peregrina ssp. xalapensis	H	1%	OBL				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100%

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☐ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☒ Yes ☐ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☒ Yes ☐ No	Water Marks: ☒ Yes ☐ No on	Sediment Deposits: ☒ Yes ☐ No
Based on: ☐ Soil temp (record temp) ☐ Other (explain)	Drift Lines: ☐ Yes ☒ No	Drainage Patterns: ☒ Yes ☐ No
Depth of inundation: none inches	Oxidized Root (live roots) Channels <12 in.: ☒ Yes ☐ No	Local Soil Survey: ☐ Yes ☐ No
Depth to free water in pit: none inches	FAC Neutral: ☒ Yes ☐ No	Water-stained Leaves: ☐ Yes ☒ No
Depth to saturated soil: 7 1/4" inches		
Check all that apply & explain below: ☐ Stream, lake or gage data ☐ Aerial photographs ☐ Other	Other (explain): recently saturated - deep hoof prints and adjacent inundation still present - Seed shrimp (ostracoda) carapaces on soil surface	

Wetland hydrology present? ☒ Yes ☐ No

Rationale for decision/remarks:

SOILS

Map Unit Name (Series and Phase) :

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0 - 5"	A	10YR 4/1	10YR 5/6	15%, large/high	silty loam	
5 - 12"+	B	10YR 4/4	none	—	silty loam	

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☒ Gleyed or Low-Chroma (=1) matrix
- ☒ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☒ Yes ☐ No

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☒ Yes	☐ No
Hydric soils present?	☒ Yes	☐ No
Wetland hydrology present?	☒ Yes	☐ No
Is the sampling point within a wetland?	☒ Yes	☐ No

Rationale/Remarks:

NOTES:

Revised 4/97

Routine Wetland Determination

DATA FORM 1 *(Revised)*

Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual)

Project/Site: Reliant - Colusa	Date: 3-26-01
Applicant/owner:	County: Colusa
Investigator(s): S. Leach, J. Stead, C. Cu	State: CA
	S/T/R:
Do normal circumstances exist on the site? ☒ Yes ☐ No	Community ID:
Is the site significantly disturbed (atypical situation)? ☐ Yes ☒ No	Transect ID:
Is the area a potential problem area? ☐ Yes ☒ No	Plot ID: C-2
Explanation of atypical or problem area:	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
d Lepidium nitidum	H	40%	NI				
d Plantago elongata	H	25%	FACW				
Lolium multiflorum	H	5%	FAC				
Medicago polymorpha	H	2%	NI				
Hordeum marinum	H	2%	FAC				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 50%

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☒ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☐ Yes ☒ No

Rationale for decision/Remarks: marginal - plantago elongata occurs in adj uplands

HYDROLOGY

Is it the growing season? ☒ Yes ☐ No	Water Marks: ☐ Yes ☒ No on	Sediment Deposits: ☐ Yes ☒ No
Based on: ☐ Soil temp (record temp) ☐ Other (explain)	Drift Lines: ☐ Yes ☒ No	Drainage Patterns: ☐ Yes ☒ No
Depth of inundation: none inches	Oxidized Root (live roots) Channels <12in.: ☐ Yes ☒ No	Local Soil Survey: ☐ Yes ☒ No
Depth to free water in pit: > 3" inches	FAC Neutral: ☐ Yes ☒ No	Water-stained Leaves: ☐ Yes ☒ No
Depth to saturated soil: > 3" inches		
Check all that apply & explain below: ☐ Stream, lake or gage data ☐ Aerial photographs ☐ Other	Other (explain): Sample point is at higher elevation than C-1. Cattle hoof prints are shallow.	

Wetland hydrology present? ☐ Yes ☒ No

Rationale for decision/remarks:

SOILS

Map Unit Name (Series and Phase) :

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-3"+	A	10YR 4/2	none	—	silty loam	

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☐ Yes ☒ No

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☐ Yes	☒ No
Hydric soils present?	☐ Yes	☒ No
Wetland hydrology present?	☐ Yes	☒ No
Is the sampling point within a wetland?	☐ Yes	☒ No

Rationale/Remarks:

NOTES:

Revised 4/97

Routine Wetland Determination

DATA FORM 1 *(Revised)*

Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual)

Project/Site: Reliant – Colusa Site Applicant/owner: Investigator(s): C. Lu, S. Leach	Date: 3-26-01 County: State: S/T/R:
Do normal circumstances exist on the site? ☒ Yes ☐ No Is the site significantly disturbed (atypical situation)? ☐ Yes ☒ No Is the area a potential problem area? ☒ Yes ☐ No Explanation of atypical or problem area: seas. hydrology	Community ID: Transect ID: Plot ID: D-1

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

	Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
1	Bromus mollis	H	80%	NI				
2	Plantago elongata	H	35%	FACW				
	Medicago polymorpha	H	5%	NI				
	Erodium moschatum	H	5%	NI				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 50%

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☒ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☐ Yes ☒ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☒ Yes ☐ No	Water Marks: ☐ Yes ☒ No on	Sediment Deposits: ☐ Yes ☒ No
Based on: ☐ Soil temp (record temp) ☐ Other (explain)	Drift Lines: ☐ Yes ☒ No	Drainage Patterns: ☒ Yes ☐ No
Depth of inundation: none inches	Oxidized Root (live roots) Channels <12in: ☐ Yes ☒ No	Local Soil Survey: ☐ Yes ☐ No
Depth to free water in pit: > 3" inches	FAC Neutral: ☐ Yes ☒ No	Water-stained Leaves: ☐ Yes ☒ No
Depth to saturated soil: > 3" inches		
Check all that apply & explain below: ☐ Stream, lake or gage data ☐ Aerial photographs ☐ Other	Other (explain): many shallow hoof prints	

Wetland hydrology present? ☐ Yes ☒ No

Rationale for decision/remarks:

SOILS

Map Unit Name (Series and Phase) :

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-3"+	~~0-3~~ A	10YR 3/2	None	—	silty - clay	

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☐ Yes ☒ No

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☐ Yes	☒ No
Hydric soils present?	☐ Yes	☒ No
Wetland hydrology present?	☐ Yes	☒ No
Is the sampling point within a wetland?	☐ Yes	☒ No

Rationale/Remarks:

NOTES:

Revised 4/97

Routine Wetland Determination

DATA FORM 1 *(Revised)*

Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual)

Project/Site: Reliant - Colusa Applicant/owner: Investigator(s): C. Lu, S. Leach	Date: 3-26 County: Colusa State: CA S/T/R:
Do normal circumstances exist on the site? ☑ Yes ☐ No Is the site significantly disturbed (atypical situation)? ☐ Yes ☑ No Is the area a potential problem area? ☐ Yes ☑ No Explanation of atypical or problem area:	Community ID: Transect ID: Plot ID: D-2

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

	Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
d	Lolium multiflorum	H	80%	FAC				
d	Limnanthes douglasii ssp.	H	15%	OBL				
	Plagiobothrys stipitatus	H	5%	OBL				
	Medicago polymorpha	H	2%	NI				
	Lepidium nitidum	H	1%	NI				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100%

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☑ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☑ Yes ☐ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☑ Yes ☐ No	Water Marks: ☐ Yes ☑ No on	Sediment Deposits: ☐ Yes ☑ No
Based on: ☐ Soil temp (record temp) ☐ Other (explain)	Drift Lines: ☐ Yes ☐ No	Drainage Patterns: ☑ Yes ☐ No
Depth of inundation: inches	Oxidized Root (live roots) Channels <12 in: ☑ Yes ☐ No	Local Soil Survey: ☐ Yes ☐ No
Depth to free water in pit: inches	FAC Neutral: ☑ Yes ☐ No	Water-stained Leaves: ☑ Yes ☐ No
Depth to saturated soil: inches		
Check all that apply & explain below: ☐ Stream, lake or gage data ☐ Aerial photographs ☐ Other	Other (explain): deep cattle hoof prints (≈ 5-6" deep) closed, shallow topographic depression would pond water.	

Wetland hydrology present? ☒ **Yes** ☐ **No**

Rationale for decision/remarks:

SOILS

Map Unit Name (Series and Phase) :

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-6 1/2	A	10YR 2/2	oxidized rhizospheres			

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☒ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☒ Yes ☐ No

Rationale for decision/Remarks:

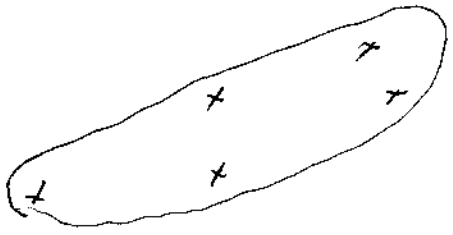
Wetland Determination

Hydrophytic vegetation present?	☒ Yes	☐ No
Hydric soils present?	☒ Yes	☐ No
Wetland hydrology present?	☒ Yes	☐ No
Is the sampling point within a wetland?	☒ Yes	☐ No

Rationale/Remarks: closed basin with deep hoof prints

NOTES:

Revised 4/97



Routine Wetland Determination

DATA FORM 1 *(Revised)*

Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual)

Project/Site: Reliant Energy Applicant/owner: Investigator(s): S. Leach, C. Lu, J. Stead	Date: 3/27/01 County: Colusa State: CA S/T/R:
Do normal circumstances exist on the site? ☒ Yes ☐ No Is the site significantly disturbed (atypical situation)? ☐ Yes ☒ No Is the area a potential problem area? ☒ Yes ☐ No Explanation of atypical or problem area: Seasonal hydrology, heavy grazing	Community ID: E-1 Transect ID: Plot ID: drainage channel

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Lolium perenne	H	75	FAC	Centaurea solistalis		<1	NL
Hordeum hystrix	H	20	FAC				
Eliocharus macrostachya	H	5	OBL				
Geranium dissectum	H	<1	NI				
Capsella bursa/pastoris	H	<1	NL				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☒ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☒ Yes ☐ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☒ Yes ☐ No	Water Marks: ☐ Yes ☒ No on	Sediment Deposits: ☐ Yes ☒ No
Based on: ☐ Soil temp (record temp) ☐ Other (explain)	Drift Lines: ☐ Yes ☒ No	Drainage Patterns: ☒ Yes ☐ No
Depth of inundation: 0 inches	Oxidized Root (live roots) Channels <12 in.: ☐ Yes ☒ No	Local Soil Survey: ☐ Yes ☐ No
Depth to free water in pit: 0 inches	FAC Neutral: ☐ Yes ☒ No	Water-stained Leaves: ☐ Yes ☒ No
Depth to saturated soil: 0 inches		
Check all that apply & explain below: ☐ Stream, lake or gage data ☐ Aerial photographs ☐ Other	Other (explain):	

Wetland hydrology present? ☒ **Yes** ☐ **No**

Rationale for decision/remarks:

SOILS

Map Unit Name (Series and Phase) :

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
15	A	10YR 2/1	no mottles			

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☒ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☒ Yes ☐ No

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☒ Yes	☐ No
Hydric soils present?	☒ Yes	☐ No
Wetland hydrology present?	☒ Yes	☐ No
Is the sampling point within a wetland?	☒ Yes	☐ No

Rationale/Remarks:

NOTES: adjacent upland soils are 3/1, so the soils are very similar in value + chroma. This indicator for a wetland may not be very reliable. **Revised 4/97**

Smaller drainage channel. This channel is dry but also has a distinct bed + bank. The vegetation does not differ that much from the upland banks

Routine Wetland Determination

DATA FORM 1 *(Revised)*

Wetland Delineation Manual or 1987 Corps Wetland Delineation Manual)

Project/Site: Reliant Energy Applicant/owner: Investigator(s): S. Leach, C. Li, J. Stead	Date: 3/27/01 County: Colusa State: CA S/T/R:
Do normal circumstances exist on the site? ☒ Yes ☐ No Is the site significantly disturbed (atypical situation)? ☐ Yes ☒ No Is the area a potential problem area? ☒ Yes ☒ No Explanation of atypical or problem area: Seasonal hydrology	Community ID: E-2 Transect ID: Plot ID: drainage channel

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Eliocharis macrostachya	H		OBL				
Lolium perenne	H		FAC				
Centaurea vulgaris	H		NL				
Geranium dissectum	H		NL				
Capsella bursa-pastoris	<1 H		NL				
Bare ground			—				

HYDROPHYTIC VEGETATION INDICATORS: Bryophytes growing on surface.

% of dominants OBL, FACW, & FAC:

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☒ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☐ Yes ☐ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☒ Yes ☐ No

Based on: ☐ Soil temp (record temp) ☐ Other (explain)

Depth of inundation: inches

Depth to free water in pit: inches

Depth to saturated soil: inches

Water Marks: ☐ Yes ☒ No on

Drift Lines: ☐ Yes ☒ No

Oxidized Root (live roots) Channels <12in.: ☒ Yes ☐ No

FAC Neutral: ☐ Yes ☐ No

Sediment Deposits: ☐ Yes ☒ No

Drainage Patterns: ☒ Yes ☐ No

Local Soil Survey: ☐ Yes ☐ No

Water-stained Leaves: ☐ Yes ☒ No

Check all that apply & explain below:

- ☐ Stream, lake or gage data
- ☐ Aerial photographs
- ☐ Other

Other (explain): ponded water (3-4") immediately adjacent to sit.

Wetland hydrology present? ☒ **Yes** ☐ **No**

Rationale for decision/remarks:

SOILS

Map Unit Name (Series and Phase) :

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
16	A	10YR 2/1	10YR 4/3	15%. motting large + med. contrast		

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☒ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☒ Yes ☐ No

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☒ Yes	☐ No
Hydric soils present?	☒ Yes	☐ No
Wetland hydrology present?	☒ Yes	☐ No
Is the sampling point within a wetland?	☒ Yes	☐ No

Rationale/Remarks:

NOTES: Width of the channel is about 4 feet. There are some larger ponded areas. Much of the channel is still saturated. There is a clear bed + bank.

Revised 4/97

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa P.P.
Applicant/owner:
Investigator(s): M Lee, C. Lu

Date: 4/10/01
County: Colusa
State: CA
S/T/R:

Do normal circumstances exist on the site? [X] Yes [ ] No
Is the site significantly disturbed (atypical situation)? [ ] Yes [X] No
Is the area a potential problem area? [X] Yes [ ] No
Explanation of atypical or problem area: Seasonal hydrology

Community ID: 1-2
Transect ID:
Plot ID:

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Centaurea solstis	H		NL				
Bromus mollis	H		NL				
Blow wives-mollis Achyrachaena	H		FAC				
Bind weed convolvulus arensis	H		NL				
Hordeum murinum	H		NL				
Hordeum marinum	H		FAC				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC:

Check all indicators that apply and explain below:

- [ ] Visual observation of plant species growing in areas of prolonged inundation/saturation
- [ ] Morphological adaptations
- [X] Technical Literature
- [ ] Physiological/reproductive adaptations
- [ ] Wetland plant database
- [ ] Personal knowledge of regional plant communities
- [ ] Other (explain)

Hydrophytic vegetation present? [ ] Yes [X] No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? [ ] Yes [X] No

Based on: [ ] Soil temp (record temp)
[ ] Other (explain)

Depth of inundation: inches
Depth to free water in pit: Ø inches
Depth to saturated soil: inches

Check all that apply & explain below:

- [ ] Stream, lake or gage data
- [ ] Aerial photographs
- [ ] Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- [ ] Inundated
- [ ] Saturated in Upper 12 Inches
- [ ] Water Marks
- [ ] Drift Lines
- [ ] Sediment Deposits
- [ ] Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- [ ] Oxidized Root Channels in Upper 12 Inches
- [ ] Water-Stained Leaves
- [ ] Local Soil Survey Data
- [ ] FAC-Neutral Test
- [ ] Other (Explain in Remarks)

Wetland hydrology present? [ ] Yes [X] No

Rationale for decision/remarks: no hydrology present

SOILS

Plot ID:

Map Unit Name (Series and Phase): Altamont Clay

Drainage Class

Taxonomy (subgroup)

Field observations confirm mapped type? ☐ Yes ☐ No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
8	A	10YR 3/3	—	—	—	

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☐ Yes ☒ No

Rationale for decision/Remarks: no ~~field~~ hydric indicators

Wetland Determination

Hydrophytic vegetation present?	☐ Yes	☒ No
Hydric soils present?	☐ Yes	☒ No
Wetland hydrology present?	☐ Yes	☒ No
Is the sampling point within a wetland?	☐ Yes	☒ No

Rationale/Remarks:

NOTES: alkali seed

Revised 3/01

Routine Wetland Determination
1987 Corps Wetland Delineation Manual

Project/Site: Colusa P.P.	Date: 4/10/01
Applicant/owner: Reliant	County: Colusa
Investigator(s): C. Lu, M. Lee	State: CA
	S/T/R:
Do normal circumstances exist on the site? ☐ Yes ☐ No	Community ID:
Is the site significantly disturbed (atypical situation)? ☐ Yes ☐ No	Transect ID: O-1
Is the area a potential problem area? ☐ Yes ☐ No	Plot ID:
Explanation of atypical or problem area:	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Plantago coronopus	H	70	FAC				
Erodium botrys	H	10	NL				
Lolium perenne	H	5	FAC				
Bromus mollis	H	5	NL				
bare ground		10	-				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 75

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☐ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☒ Yes ☐ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☐ Yes ☒ No

Based on: ☐ Soil temp (record temp)
☐ Other (explain)

Depth of inundation: inches
Depth to free water in pit: Ø inches
Depth to saturated soil: inches

Check all that apply & explain below:

- ☐ Stream, lake or gage data
- ☐ Aerial photographs
- ☐ Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- ☐ Inundated – some hoof marks
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Wetland hydrology present? ☒ Yes ☐ No

Rationale for decision/remarks: Some are slightly lower in elevation by seasonal vicies

SOILS Plot ID:

Map Unit Name (Series and Phase): altamont clay

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-6+	A	10 YR 4/3			Silty loam	

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☐ Yes ☒ No

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☒ Yes	☐ No
Hydric soils present?	☐ Yes	☒ No
Wetland hydrology present?	☒ Yes	☐ No
Is the sampling point within a wetland?	☐ Yes	☒ No

Rationale/Remarks:

NOTES: alkali scald

Other plants in swale

Atriplex sp.

Valpia m

Hordeum murinum

Lepidium latipes var. latipes (most dominant)

Medicago polymorpha

Lepidium n.

Hordeum murinum

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa PP Applicant/owner: Reliant Investigator(s): C. Lee, M Lee	Date: 4/10/01 County: Colusa State: CA S/T/R:
Do normal circumstances exist on the site? ☒ Yes ☐ No Is the site significantly disturbed (atypical situation)? ☐ Yes ☒ No Is the area a potential problem area? ☒ Yes ☐ No Explanation of atypical or problem area: Seasonal hydrology	Community ID: Transect ID: U-1 Plot ID:

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Plagiobothrys stipitatus	H	5	OBL				
Hordeum marinum	A	5	FAC				
Bare ground		90	—				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☐ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☒ Yes ☐ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☐ Yes ☒ No

Based on: ☐ Soil temp (record temp)

☐ Other (explain)

Depth of inundation: inches

Depth to free water in pit: ∅ inches

Depth to saturated soil: inches

Check all that apply & explain below:

- ☐ Stream, lake or gage data
- ☐ Aerial photographs
- ☐ Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Wetland hydrology present? ☒ **Yes** ☐ **No**

Rationale for decision/remarks: heavy hoofprints

SOILS Plot ID:

Map Unit Name (Series and Phase) : altamont clay

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
12	A	10YR 3/2				

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☒ **Yes** ☐ **No**

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☒ **Yes**	☐ **No**
Hydric soils present?	☐ **Yes**	☑ **No**
Wetland hydrology present?	☒ **Yes**	☐ **No**
Is the sampling point within a wetland?	☐ **Yes**	☑ **No**

Rationale/Remarks:

NOTES: alkali scald

Revised 3/01

Routine Wetland Determination
1987 Corps Wetland Delineation Manual

Project/Site: Colusa P.P.
Applicant/owner: Reliant
Investigator(s): C. Lu, M. Lee

Date: Colusa 4/10/01
County:
State: CA
S/T/R:

Do normal circumstances exist on the site? ☒ Yes ☒ No
Is the site significantly disturbed (atypical situation)? ☐ Yes ☒ No
Is the area a potential problem area? ☒ Yes ☐ No
Explanation of atypical or problem area: seasonal hydrology

Community ID: G1
Transect ID:
Plot ID:

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Plantago coronado	H	70	FACW				
Bromus mollis	H	20	NL				
Erodium botrys	H	<5	NL				
Lepidium latipes latipes	H	5	OBL				

HYDROPHYTIC VEGETATION INDICATORS: 75
% of dominants OBL, FACW, & FAC:

Check all indicators that apply and explain below:
- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☒ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☒ Yes ☐ No
Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☐ Yes ☒ No
Based on: ☐ Soil temp (record temp)
☐ Other (explain)

Depth of inundation: inches
Depth to free water in pit: Ø inches
Depth to saturated soil: inches

Check all that apply & explain below:
- ☐ Stream, lake or gage data
- ☐ Aerial photographs
- ☐ Other

WETLAND HYDROLOGY INDICATORS
Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☒ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):
- ☒ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Wetland hydrology present? ☒ **Yes** ☐ **No**
Rationale for decision/remarks: a few hoofprints

SOILS

Map Unit Name (Series and Phase) : altamont clay

Plot ID:

Taxonomy (subgroup)

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-3+	A	10YR 4/2	[redacted]	[redacted]		

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☐ Yes ☒ No

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☒ Yes	☐ No
Hydric soils present?	☐ Yes	☒ No
Wetland hydrology present?	☒ Yes	☐ No
Is the sampling point within a wetland?	☐ Yes	☒ No

Rationale/Remarks:

NOTES: soil very dry + hard to dig., alkali scald

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa Applicant/owner: Investigator(s): Mike + C. Lu	Date: 4-11-01 County: Colusa State: CA S/T/R:
Do normal circumstances exist on the site? ☒ Yes ☐ No Is the site significantly disturbed (atypical situation)? ☐ Yes ☒ No Is the area a potential problem area? ☒ Yes ☐ No Explanation of atypical or problem area:	Community ID: Transect ID: Plot ID: I 1

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Plantago coronopus	50	H					
Lepidium nitidum	30	H					
Erodium botrys	10	H					
Bromus hordeaceus	<5	H					

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: each group = 100%

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☐ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☒ Yes ☐ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☒ Yes ☐ No

Based on: ☐ Soil temp (record temp)
☐ Other (explain)

Depth of inundation: — inches
Depth to free water in pit: — inches
Depth to saturated soil: — inches

Check all that apply & explain below:

- ☐ Stream, lake or gage data
- ☐ Aerial photographs
- ☐ Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators:
- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☒ Drainage Patterns in Wetlands (lower)
- X mud cracking
- X moss

Secondary Indicators (2 or more Required):
- ☒ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Wetland hydrology present? ☒ Yes ☐ No

Rationale for decision/remarks: point is in lower elevation ≈ 4" from upland
Road goes through this pool

SOILS Plot ID:

Map Unit Name (Series and Phase): altamont clay

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-5"	A	10YR3/2			Silty loam	

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☐ Yes ☒ No

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☒ Yes	☐ No
Hydric soils present?	☐ Yes	☒ No
Wetland hydrology present?	☒ Yes	☐ No
Is the sampling point within a wetland?	☐ Yes	☒ No

Rationale/Remarks:

NOTES: alkali scald

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa
Applicant/owner:
Investigator(s): M. Lee + C. Lee

Date: 4-10-01
County:
State:
S/T/R:

Do normal circumstances exist on the site? ☒ Yes ☐ No
Is the site significantly disturbed (atypical situation)? ☐ Yes ☒ No
Is the area a potential problem area? ☒ Yes ☐ No
Explanation of atypical or problem area:

Community ID:
Transect ID:
Plot ID: R1

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Plantago coronopus	H	60	FAC				
Erodium botrys	H	30	NL				
Vulpia myuros	H	<5	FACU				
Bromus hord	H	<5	NL				
bare ground		10	—				

HYDROPHYTIC VEGETATION INDICATORS: 60

% of dominants OBL, FACW, & FAC:

Check all indicators that apply and explain below:

☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
☐ Morphological adaptations
☐ Technical Literature
☐ Physiological/reproductive adaptations
☐ Wetland plant database
☐ Personal knowledge of regional plant communities
☐ Other (explain)

Hydrophytic vegetation present? ☒ Yes ☐ No
Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☒ Yes ☐ No
Based on: ☐ Soil temp (record temp)
☐ Other (explain)

Depth of inundation: — inches
Depth to free water in pit: — inches
Depth to saturated soil: — inches

Check all that apply & explain below:
☐ Stream, lake or gage data
☐ Aerial photographs
☐ Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators: Some [illegible]
☐ Inundated
☐ Saturated in Upper 12 Inches
☐ Water Marks
☐ Drift Lines
☐ Sediment Deposits
☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):
☐ Oxidized Root Channels in Upper 12 Inches
☐ Water-Stained Leaves
☐ Local Soil Survey Data
☐ FAC-Neutral Test
☐ Other (Explain in Remarks)

Wetland hydrology present? ☐ Yes ☒ No
Rationale for decision/remarks: on a slope

SOILS

Plot ID:

Map Unit Name (Series and Phase) : altamont clay

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-4+	A	10YR 3/3			silty loam	

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☐ **Yes** ☐ **No**

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☒ **Yes**	☐ **No**
Hydric soils present?	☐ **Yes**	☒ **No**
Wetland hydrology present?	☐ **Yes**	☒ **No**
Is the sampling point within a wetland?	☐ **Yes**	☒ **No**

Rationale/Remarks:

NOTES: alkali scald

Revised 3/01

Routine Wetland Determination
1987 Corps Wetland Delineation Manual

Project/Site: Mura	Date: 4-10-01
Applicant/owner:	County:
Investigator(s): M. Lee + C. Lee	State:
	S/T/R:

Do normal circumstances exist on the site?	☒ Yes	☐ No	Community ID:
Is the site significantly disturbed (atypical situation)?	☐ Yes	☒ No	Transect ID:
Is the area a potential problem area?	☒ Yes	☐ No	Plot ID: Q1
Explanation of atypical or problem area:			

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine) 5' radius

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Hordeum marinum	H		FAC				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☐ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☒ Yes ☐ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☒ Yes ☐ No

Based on: ☐ Soil temp (record temp)
☐ Other (explain)

Depth of inundation: inches
Depth to free water in pit: inches
Depth to saturated soil: inches

Check all that apply & explain below:

- ☐ Stream, lake or gage data
- ☐ Aerial photographs
- ☐ Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators: Deep hoof prints

- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Wetland hydrology present? ☒ **Yes** ☐ **No**

Rationale for decision/remarks: found in depression ≃ 6"

SOILS

Plot ID:

Map Unit Name (Series and Phase): altamont clay

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-6+	A	10YR4/2			Silty loam	

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☒ Yes ☐ No

Rationale for decision/Remarks:

Wetland Determination

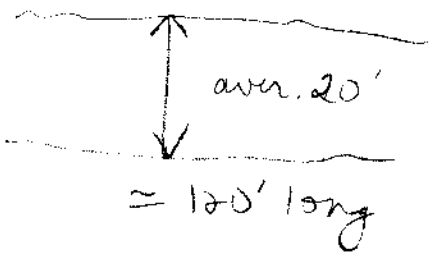
Hydrophytic vegetation present?	☒ Yes	☐ No
Hydric soils present?	☐ Yes	☒ No
Wetland hydrology present?	☒ Yes	☐ No
Is the sampling point within a wetland?	☐ Yes	☒ No

Rationale/Remarks:

NOTES: alkali scald

This is lower swale that receives runoff from adjacent uplands.

other plants in swale:
Bromus hordeaceus
lolium multiflorum/perenne
Hordeum marinum



This is not hydrologically connected to creek (is elevated).

Revised 3/01

Routine Wetland Determination
1987 Corps Wetland Delineation Manual

Project/Site: Colusa	Date: 4-10-01
Applicant/owner: Reliant	County: Colusa
Investigator(s): M. Lee & C. Lu	State:
	S/T/R:

Do normal circumstances exist on the site?	☒ Yes	☐ No	Community ID:
Is the site significantly disturbed (atypical situation)?	☐ Yes	☒ No	Transect ID:
Is the area a potential problem area?	☒ Yes	☐ No	Plot ID: D 2
Explanation of atypical or problem area:			

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Bromus hordeaceus	H	85	NL				
Taeniatherum caput-medusae	H	<5	NL				
Hordeum murinum	H	10	FAC				
Brv	Brv	<5	NL				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 10

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☐ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☐ Yes ☒ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☒ Yes ☐ No

Based on: ☐ Soil temp (record temp)
☐ Other (explain)

Depth of inundation: — inches
Depth to free water in pit: — inches
Depth to saturated soil: — inches

Check all that apply & explain below:

- ☐ Stream, lake or gage data
- ☐ Aerial photographs
- ☐ Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Wetland hydrology present? ☐ Yes ☒ No

Rationale for decision/remarks: Slightly higher than adjacent swale

SOILS Plot ID:

Map Unit Name (Series and Phase) : altamont clay

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-5+	A	10YR3/2				

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☐ Yes ☒ No

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☐ Yes	☒ No
Hydric soils present?	☐ Yes	☒ No
Wetland hydrology present?	☐ Yes	☒ No
Is the sampling point within a wetland?	☐ Yes	☒ No

Rationale/Remarks:

NOTES: alkali scald

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Collins	Date: 4-10-01
Applicant/owner:	County:
Investigator(s): M. Lee & C. Lee	State:
	S/T/R:

Do normal circumstances exist on the site?	☒ Yes	☐ No	Community ID:
Is the site significantly disturbed (atypical situation)?	☐ Yes	☒ No	Transect ID:
Is the area a potential problem area?	☒ Yes	☐ No	Plot ID: K1
Explanation of atypical or problem area:			

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Plantago major	H	80	FAC+				
Eragrostis hypnoides	H	5	NL				
Bromus hordeaceus	H	<5	NL				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 80 bare ground 10%.

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☐ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☒ Yes ☐ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☒ Yes ☐ No

Based on: ☐ Soil temp (record temp)

☐ Other (explain)

Depth of inundation: — inches

Depth to free water in pit: — inches

Depth to saturated soil: — inches

Check all that apply & explain below:

- ☐ Stream, lake or gage data
- ☐ Aerial photographs
- ☐ Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☒ Drainage Patterns in Wetlands 24" lower

Secondary Indicators (2 or more Required):

- ☒ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Wetland hydrology present? ☒ Yes ☐ No

Rationale for decision/remarks: Lower — only slightly = 2"

SOILS Plot ID:

Map Unit Name (Series and Phase) : Drainage Class

Altamont clay Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-4	A	10YR 4/2			Silty clay	

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☐ Yes ☒ No

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☒ Yes	☐ No
Hydric soils present?	☐ Yes	☒ No
Wetland hydrology present?	☒ Yes	☐ No
Is the sampling point within a wetland?	☐ Yes	☒ No

Rationale/Remarks:

NOTES: alkali scald

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa Applicant/owner: Reliant Investigator(s): M. Lee & C. Lee	Date: 4-9-01 County: Colusa State: CA S/T/R:
Do normal circumstances exist on the site? ☒ Yes ☐ No Is the site significantly disturbed (atypical situation)? ☐ Yes ☒ No Is the area a potential problem area? ☒ Yes ☐ No Explanation of atypical or problem area: Seasonal hydrology	Community ID: Transect ID: Plot ID: A-2

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine) 5' radius

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Hordeum marinum	H	35	FAC				
Lolium multiflorum/perenne	H	35	FAC				
Lepidium nitidum	H	<5	NL				
Plantago coronopus	H	<5	FAC				
Lepidium latipes var. latipes	H	<5	OBL				
Linaria vulgaris		<5	NL				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 70 Bare ground 20%.

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☐ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☒ Yes ☐ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☒ Yes ☐ No

Based on: ☐ Soil temp (record temp) ☐ Other (explain)

Depth of inundation: — inches

Depth to free water in pit: — inches

Depth to saturated soil: — inches

Check all that apply & explain below:

- ☐ Stream, lake or gage data
- ☐ Aerial photographs
- ☐ Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators: x hoof prints

- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☒ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- ☒ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Wetland hydrology present? ☒ Yes ☐ No

Rationale for decision/remarks: Lower elevation ≈ 2' from adjacent upland

SOILS

Plot ID:

Map Unit Name (Series and Phase): Altamont Clay

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-4+	A	10YR 3/2	-		Silty loam	

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☒ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☐ Yes ☒ No very dry; low redox marks

Rationale for decision/Remarks: cobbles + gravel in soil

Wetland Determination

Hydrophytic vegetation present?	☒ Yes	☐ No
Hydric soils present?	☐ Yes	☒ No
Wetland hydrology present?	☒ Yes	☐ No
Is the sampling point within a wetland?	☐ Yes	☒ No

Rationale/Remarks:

NOTES: alkali scald

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa Co.	Date: 7-10-01
Applicant/owner:	County:
Investigator(s): M. Lee & C Lu	State:
	S/T/R:
Do normal circumstances exist on the site? ☐ Yes ☐ No	Community ID:
Is the site significantly disturbed (atypical situation)? ☐ Yes ☐ No	Transect ID:
Is the area a potential problem area? ☐ Yes ☐ No	Plot ID: F2
Explanation of atypical or problem area:	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine) 2' radius

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Hordeum leporinum	H	5	OBL				
Silybum marianum	H	<5	FACU				
Hordeum murinum	H	80%	NL				
Erodium botrys	H	5	NL				
Brassica nigra	H	<5	NL				
Geranium dissectum	H	<5	?				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC:

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☐ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☐ Yes ☒ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☒ Yes ☐ No

Based on: ☐ Soil temp (record temp)

☐ Other (explain)

Depth of inundation: — inches

Depth to free water in pit: inches

Depth to saturated soil: — inches

Check all that apply & explain below:

- ☐ Stream, lake or gage data
- ☐ Aerial photographs
- ☐ Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Wetland hydrology present? ☐ Yes ☒ No

Rationale for decision/remarks:

SOILS Plot ID:

Map Unit Name (Series and Phase): Altamont Clay

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-41	A	10YR3/2	7.5YR4/6	20%, med, ki	silty loam	

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☒ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☒ **Yes** ☐ **No**

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☐ Yes	☒ No
Hydric soils present?	☒ Yes	☐ No
Wetland hydrology present?	☐ Yes	☒ No
Is the sampling point within a wetland?	☐ Yes	☒ No

Rationale/Remarks:

NOTES: Point located ~ 3' higher than a swale that drains into a channel.

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa PP
Applicant/owner: Reliant
Investigator(s): C Lu, M Lee

Date: 4/10/03
County: Colusa
State: CA
S/T/R:

Do normal circumstances exist on the site? ☒ Yes ☐ No
Is the site significantly disturbed (atypical situation)? ☐ Yes ☒ No
Is the area a potential problem area? ☒ Yes ☐ No
Explanation of atypical or problem area: Seasonal hydrology

Community ID: V-1
Transect ID:
Plot ID:

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Hordeum marinum	7.5	H	FAC				
Downingia sp.	<5	H	OBL				
Plagiobothrys stipitatus	<5	H	OBL				
Bare ground	20		-				
Eryngium aristulatum var. parishii		H	FACW				
Coyote thistle							
Woolly marbles Psilocarphus brevissimus			OBL				

5ft wide

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 80

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☐ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☒ Yes ☐ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☐ Yes ☒ No

Based on: ☐ Soil temp (record temp)
☐ Other (explain)

Depth of inundation: 0 inches
Depth to free water in pit: inches
Depth to saturated soil: inches

Check all that apply & explain below:

- ☐ Stream, lake or gage data
- ☐ Aerial photographs
- ☐ Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- ☒ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Wetland hydrology present? ☒ **Yes** ☐ **No**

Rationale for decision/remarks: deep plentiful hoofprints

SOILS

Plot ID:

Map Unit Name (Series and Phase) :

Drainage Class

Taxonomy (subgroup) Altamont Clay

Field observations confirm mapped type? ☐ Yes ☐ No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
+8	A	10YR 3/2	7.5YR 4/6	30% fine/med 1g mottles med contrast		

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☒ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☒ **Yes** ☐ **No**

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☒ **Yes**	☐ **No**
Hydric soils present?	☒ **Yes**	☐ **No**
Wetland hydrology present?	☒ **Yes**	☐ **No**
Is the sampling point within a wetland?	☒ **Yes**	☐ **No**

large band of

Rationale/Remarks: vernal pool next to alkali swale

NOTES:

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa P.P.	Date: 4/10/01
Applicant/owner: Reliant	County: Colusa
Investigator(s): C. Lu, M. Lee	State: CA
	S/T/R:
Do normal circumstances exist on the site? ☒ Yes ☐ No	Community ID: T-1
Is the site significantly disturbed (atypical situation)? ☐ Yes ☒ No	Transect ID:
Is the area a potential problem area? ☒ Yes ☐ No	Plot ID:
Explanation of atypical or problem area: Seasonal hydrology	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Atriplex falcata		H	FAC				
Bromus mollis		H	FACU-				
Plantago coronopus		H	FAC				
Sand spurry		H	FAC-				
Hordeum marinum		H					

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 100%

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☐ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☒ Yes ☐ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☐ Yes ☐ No

Based on: ☐ Soil temp (record temp)

☐ Other (explain)

Depth of inundation: inches

Depth to free water in pit: inches

Depth to saturated soil: inches

Check all that apply & explain below:

- ☐ Stream, lake or gage data
- ☐ Aerial photographs
- ☐ Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Wetland hydrology present? ☒ **Yes** ☐ **No**

Rationale for decision/remarks: hoofprints

SOILS

Plot ID:

Map Unit Name (Series and Phase) : Altamont Clay

Drainage Class

Taxonomy (subgroup)

Field observations confirm mapped type? ☐ Yes ☐ No

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
0-4+	A	10YR 4/3	[redacted]	[redacted]	—	

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☐ Yes ☒ No

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☒ Yes	☐ No
Hydric soils present?	☐ Yes	☒ No
Wetland hydrology present?	☒ Yes	☐ No
Is the sampling point within a wetland?	☐ Yes	☒ No

Rationale/Remarks:

NOTES: deep horizons - alkali swale

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa P.P.	Date: 4/10/07
Applicant/owner: Reliant	County: Colusa
Investigator(s): C Lee, M. Lee	State: CA
	S/T/R:
Do normal circumstances exist on the site? ☒ Yes ☐ No	Community ID: P-1
Is the site significantly disturbed (atypical situation)? ☐ Yes ☒ No	Transect ID:
Is the area a potential problem area? ☒ Yes ☐ No	Plot ID:
Explanation of atypical or problem area: Seasonal hydrology	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Atriplex falcata	H	15	FAC	Hordeum marinum		<5	FAC
Sand spurrey Spergularia macrotheca	H	5	FAC-	Bare ground		60	/
Bromus mollis	H	30	NL				
Lolium perenne	H	15	FAC				
Tseed	H	10					
Lepidium nitidum	H	5	NL				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 10% of 40% (25%)

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☐ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☐ Yes ☒ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☐ Yes ☐ No

Based on: ☐ Soil temp (record temp)
☐ Other (explain)

Depth of inundation: 0 inches

Depth to free water in pit: inches

Depth to saturated soil: inches

Check all that apply & explain below:

- ☐ Stream, lake or gage data
- ☐ Aerial photographs
- ☐ Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☒ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Wetland hydrology present? ☒ **Yes** ☐ **No**

Rationale for decision/remarks:

slightly lower in elevation

SOILS Plot ID:

Map Unit Name (Series and Phase): Altamont Clay — Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
.0 -2+	A	10YR 3/3	[redacted]	[redacted]		

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☒ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☒ Yes ☐ No

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☒ Yes →	☒ No
Hydric soils present?	☒ Yes →	☒ No
Wetland hydrology present?	☒ Yes	☐ No
Is the sampling point within a wetland?	☒ Yes	☒ No

Rationale/Remarks: hydrology very marginal

NOTES: alkali scald

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa P.P.	Date: 4/9/01
Applicant/owner: Reliant	County: Colusa
Investigator(s): M. Lee + C. Lu	State: CA
	S/T/R:

Do normal circumstances exist on the site? ☒ Yes ☐ No	Community ID: D-2
Is the site significantly disturbed (atypical situation)? ☐ Yes ☒ No	Transect ID:
Is the area a potential problem area? ☒ Yes ☐ No	Plot ID:
Explanation of atypical or problem area: Seasonal hydrology	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Bare ground	H	20		Lepidium latipes latipes	H	<5	OBL
Bromus mollis	H	60	NL				
Lepidium nitidum	H	<5	NL				
Achyrachaena mollis Blow wives	H	<5	FAC				
Centaurea solistatus	H	10	NL				
Medicago polymorpha	H	5	NL				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: <5

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☐ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☐ Yes ☒ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☒ Yes ☐ No

Based on: ☐ Soil temp (record temp)

☐ Other (explain)

Depth of inundation: inches

Depth to free water in pit: 0 inches

Depth to saturated soil: inches

Check all that apply & explain below:

- ☐ Stream, lake or gage data
- ☐ Aerial photographs
- ☐ Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☒ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Wetland hydrology present? ☒ **Yes** ☐ **No**

Rationale for decision/remarks: Cow hoofprints present

SOILS

Plot ID:

Map Unit Name (Series and Phase) :
Altamont Clay

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
10''	A	10YR 3/3	[redacted]	[redacted]	silty loam	

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☒ Yes ☒ No

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☐ Yes	☒ No
Hydric soils present?	☐ Yes	☒ No
Wetland hydrology present?	☒ Yes	☐ No
Is the sampling point within a wetland?	☐ Yes	☒ No

Rationale/Remarks:

NOTES: The Elevation of D-1 + D-2 are almost the same, although there is more upland vegetation in D-2 alkali scald

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa P.P.
Applicant/owner: Reliant
Investigator(s): C. Lu, M. Lee

Date: 4/9/01
County: Colusa
State: CA
S/T/R:

Do normal circumstances exist on the site? ☒ Yes ☐ No
Is the site significantly disturbed (atypical situation)? ☐ Yes ☒ No
Is the area a potential problem area? ☒ Yes ☐ No
Explanation of atypical or problem area: Seasonal drainage

Community ID: A-1
Transect ID:
Plot ID:

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Bare ground	H	80		Lolium multiflorum / perenne	H	<5	FAC*
Plagiobothrys stipitatus	H	10	OBL		H		
Erodium botrys	H	<5	NL	Hordeum marinum	H	<5	FAC
Lepidium latipes latipes	H	5	OBL	Plantago coronopus		5	FAC
[illegible]	H						
Cynara thistle Aringium	H	<5	FACW				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC:

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☒ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☒ Yes ☐ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☐ Yes ☒ No

Based on: ☐ Soil temp (record temp)
☐ Other (explain)

Depth of inundation: inches
Depth to free water in pit: inches
Depth to saturated soil: inches

Check all that apply & explain below:

- ☐ Stream, lake or gage data
- ☐ Aerial photographs
- ☐ Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☒ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☒ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Wetland hydrology present? ☒ **Yes** ☐ **No**

Rationale for decision/remarks: Cow prints present in area

SOILS

Plot ID:

Map Unit Name (Series and Phase) : Altamont Clay

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
10"	A	10YR 3/2	[redacted]	[redacted]	clay - drying + very hard	

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☒ Yes ☒ No

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☒ Yes	☐ No
Hydric soils present?	☒ Yes	☒ No
Wetland hydrology present?	☒ Yes	☐ No
Is the sampling point within a wetland?	☒ Yes	☐ No

Rationale/Remarks:

Dry + soil is very hard

NOTES: alkali scald

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa P.P.	Date: 4/9/01
Applicant/owner: Reliant	County: Colusa
Investigator(s): C. Lu, M. Lee	State: CA
	S/T/R:
Do normal circumstances exist on the site? ☒ Yes ☐ No	Community ID: A-3
Is the site significantly disturbed (atypical situation)? ☐ Yes ☒ No	Transect ID:
Is the area a potential problem area? ☒ Yes ☐ No	Plot ID:
Explanation of atypical or problem area: Seasonal hydrology	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Achyrachaena mollis (Blow wives)	H	<5	FAC	lepidium nitidum		<5	OBL
Bromus hordeaceous	H	35	FACU-				
Plantago coronopus	H	45	FAC				
Medicago polymorpha (bur clover)	H	<5	NL				
Erodium botrys	H	<5	NL				
Bare ground		10	—				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC:

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☒ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☒ Yes ☐ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☒ Yes ☐ No

Based on: ☐ Soil temp (record temp)

☐ Other (explain)

Depth of inundation: 0 inches

Depth to free water in pit: inches

Depth to saturated soil: inches

Check all that apply & explain below:

- ☐ Stream, lake or gage data
- ☐ Aerial photographs
- ☐ Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☒ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- ☒ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Wetland hydrology present? ☒ **Yes** ☐ **No**

Rationale for decision/remarks:

SOILS

Plot ID:

Map Unit Name (Series and Phase): Altamont Clay

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
5"	A	10YR 4/2	[redacted]	[redacted]	silty loam	

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☒ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☒ Yes ☒ No

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☒ Yes	☐ No
Hydric soils present?	☒ Yes	☒ No
Wetland hydrology present?	☒ Yes	☐ No
Is the sampling point within a wetland?	☒ Yes	☐ No

Rationale/Remarks:

NOTES: alkali scald

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa P.P.
Applicant/owner: Reliant
Investigator(s): C Lu, M. Lee

Date: 4/9/01
County: Colusa
State: CA
S/T/R:

Do normal circumstances exist on the site? ☒ Yes ☐ No
Is the site significantly disturbed (atypical situation)? ☐ Yes ☒ No
Is the area a potential problem area? ☒ Yes ☐ No
Explanation of atypical or problem area: seasonal drainage

Community ID: A-4
Transect ID:
Plot ID:

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Achyrachaena Blow wives mollis	H	<5	FAC				
bare ground	H	10 %	-				
Centaurea solistatus	H	50 %	NL				
Bromus hort...	H	~~<5~~ 35	NL				
Hordeum marinum	H	~~<5~~ <5	FAC				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: <50

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☒ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☐ Yes ☒ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☐ Yes ☒ No
Based on: ☐ Soil temp (record temp)
☐ Other (explain)

Depth of inundation: inches
Depth to free water in pit: Ø inches
Depth to saturated soil: inches

Check all that apply & explain below:

- ☐ Stream, lake or gage data
- ☐ Aerial photographs
- ☐ Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☒ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Wetland hydrology present? ☒ **Yes** ☐ **No**

Rationale for decision/remarks: Cow hoofprints

SOILS | Plot ID:

Map Unit Name (Series and Phase): Altamont Clay

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
8"	A	10YR 3/2	—	[illegible]	silty loam	

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☐ **Yes** ☒ **No**

Rationale for decision/Remarks:

Wetland Determination

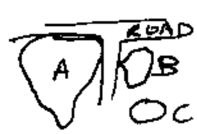
Hydrophytic vegetation present?	☐ **Yes**	☒ **No**
Hydric soils present?	☐ **Yes**	☒ **No**
Wetland hydrology present?	☒ **Yes**	☐ **No**
Is the sampling point within a wetland?	☐ **Yes**	☒ **No**

Rationale/Remarks:

NOTES: ✗ re: area B + C   alkali scald

Revised 3/01

'Areas B + C were recorded by GPS. They are separated by a road but were once part of the same vernal pool.



Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa P.P.
Applicant/owner: Reliant
Investigator(s): C. Lu, M. Lu

Date: 4/9/01
County: Colusa
State:
S/T/R:

Do normal circumstances exist on the site? [X] Yes [ ] No
Is the site significantly disturbed (atypical situation)? [ ] Yes [X] No
Is the area a potential problem area? [X] Yes [ ] No
Explanation of atypical or problem area: Seasonal hydrology

Community ID: D-1
Transect ID:
Plot ID:

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Bare ground	H	50		Bromus mollis		<5	NL
Lepidium latipes latipes m.	H	25	OBL	Poa annua		~5	FACW
Erodium botrys	H	<5	NL	Polygonum sp.		<5	-
Plantago coronata	H	15	FAC	Plagiobothrys stipitatus sp.			OBL
Coyote thistle Eryngium alismaefolium	H	<5	FACW		not in plot but in the area		
Medicago polymorpha	H	<5	NL				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 25 of 50%, or 50%.

Check all indicators that apply and explain below:

- [ ] Visual observation of plant species growing in areas of prolonged inundation/saturation
- [ ] Morphological adaptations
- [X] Technical Literature
- [ ] Physiological/reproductive adaptations
- [ ] Wetland plant database
- [ ] Personal knowledge of regional plant communities
- [ ] Other (explain)

Hydrophytic vegetation present? [X] Yes [ ] No
Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? [ ] Yes [X] No
Based on: [ ] Soil temp (record temp)
[ ] Other (explain)

Depth of inundation: inches
Depth to free water in pit: 0 inches
Depth to saturated soil: inches

Check all that apply & explain below:

- [ ] Stream, lake or gage data
- [ ] Aerial photographs
- [ ] Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- [ ] Inundated
- [ ] Saturated in Upper 12 Inches
- [ ] Water Marks
- [ ] Drift Lines
- [ ] Sediment Deposits
- [X] Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- [ ] Oxidized Root Channels in Upper 12 Inches
- [ ] Water-Stained Leaves
- [ ] Local Soil Survey Data
- [ ] FAC-Neutral Test
- [ ] Other (Explain in Remarks)

Wetland hydrology present? [X] Yes [ ] No
Rationale for decision/remarks: Cow hoof prints, slightly depressed area next to fenceline

SOILS Plot ID:

Map Unit Name (Series and Phase): Altamont Clay

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
~8	A	10YR 3/3	[redacted]	[redacted]	silty loam	

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☒ Yes ☒ No

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☒ Yes	☐ No
Hydric soils present?	☒ Yes	☒ No
Wetland hydrology present?	☒ Yes	☐ No
Is the sampling point within a wetland?	☒ Yes	☐ No

Rationale/Remarks:

NOTES: Alkaline soils

Revised 3/01

Routine Wetland Determination
1987 Corps Wetland Delineation Manual

Project/Site: Colusa P.P.	Date: 4/10/01
Applicant/owner: Reliant	County: Colusa
Investigator(s): C. Lu, M. Lee	State:
	S/T/R:
Do normal circumstances exist on the site? ☒ Yes ☐ No	Community ID: F-1
Is the site significantly disturbed (atypical situation)? ☐ Yes ☒ No	Transect ID:
Is the area a potential problem area? ☒ Yes ☐ No	Plot ID:
Explanation of atypical or problem area: seasonal drainage	

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Plantago coronata	H	50	FAC	bare ground		15	
Lepidium latipes latipes	H	20	OBL				
Hordeum marinum	H	10	NL				
Chamomilla occidentalis	H	<5	N				
shepard's purse	H	<5	NL				
Lolium perenne	H	<5	FAC				

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 70

Check all indicators that apply and explain below:

- ☐ Visual observation of plant species growing in areas of prolonged inundation/saturation
- ☐ Morphological adaptations
- ☒ Technical Literature
- ☐ Physiological/reproductive adaptations
- ☐ Wetland plant database
- ☐ Personal knowledge of regional plant communities
- ☐ Other (explain)

Hydrophytic vegetation present? ☒ Yes ☐ No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? ☐ Yes ☒ No

Based on: ☐ Soil temp (record temp)
☐ Other (explain)

Depth of inundation: inches
Depth to free water in pit: inches
Depth to saturated soil: inches

Check all that apply & explain below:

- ☐ Stream, lake or gage data
- ☐ Aerial photographs
- ☐ Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- ☐ Inundated
- ☐ Saturated in Upper 12 Inches
- ☐ Water Marks
- ☐ Drift Lines
- ☐ Sediment Deposits
- ☐ Drainage Patterns in Wetlands

Secondary Indicators (2 or more Required):

- ☐ Oxidized Root Channels in Upper 12 Inches
- ☐ Water-Stained Leaves
- ☐ Local Soil Survey Data
- ☐ FAC-Neutral Test
- ☐ Other (Explain in Remarks)

Wetland hydrology present? ☐ Yes ☒ No

Rationale for decision/remarks: site is on a slope. No cow hoofprints

SOILS Plot ID:

Map Unit Name (Series and Phase) : Altamont Clay

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
5	A	10YR 3/3	[redacted]	[redacted]		

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☐ **Yes** ☑ **No**

Rationale for decision/Remarks:

Wetland Determination

Hydrophytic vegetation present?	☒ **Yes**	☐ **No**
Hydric soils present?	☐ **Yes**	☒ **No**
Wetland hydrology present?	☒ **Yes**	☐ **No**
Is the sampling point within a wetland?	☐ **Yes**	☒ **No**

Rationale/Remarks:

NOTES: Ground very hard, alkali scald

Revised 3/01

Routine Wetland Determination

1987 Corps Wetland Delineation Manual

Project/Site: Colusa P.P. Applicant/owner: Reliant Investigator(s): C. Lu, M. Lee	Date: 4/6/01 County: Colusa State: CA S/T/R:
Do normal circumstances exist on the site? [x] Yes [ ] No Is the site significantly disturbed (atypical situation)? [ ] Yes [x] No Is the area a potential problem area? [x] Yes [ ] No Explanation of atypical or problem area: Seasonal drainage	Community ID: F-3 Transect ID: Plot ID:

VEGETATION (For *strata, indicate T = tree; S = shrub; H = herb; V = vine)

Dominant Plant Species	*Stratum	% cover	Indicator	Dominant Plant Species	*Stratum	% cover	Indicator
Plantago coronopus	H	~~10~~ ~~8~~ 10	FAC				
Convolvulus arvensis	H	10	NL				
Polygonum arenastrum (common)	H	~~30~~ 35	—				
		~~45~~					

HYDROPHYTIC VEGETATION INDICATORS:

% of dominants OBL, FACW, & FAC: 10 of 55

bare ground 45%

Check all indicators that apply and explain below:

- [ ] Visual observation of plant species growing in areas of prolonged inundation/saturation
- [ ] Morphological adaptations
- [ ] Technical Literature
- [ ] Physiological/reproductive adaptations
- [ ] Wetland plant database
- [ ] Personal knowledge of regional plant communities
- [ ] Other (explain)

Hydrophytic vegetation present? [ ] Yes [x] No

Rationale for decision/Remarks:

HYDROLOGY

Is it the growing season? [x] Yes [ ] No

Based on: [ ] Soil temp (record temp)
[ ] Other (explain)

Depth of inundation:	inches
Depth to free water in pit:	inches
Depth to saturated soil:	inches

Check all that apply & explain below:

- [ ] Stream, lake or gage data
- [ ] Aerial photographs
- [ ] Other

WETLAND HYDROLOGY INDICATORS

Primary Indicators:

- [ ] Inundated
- [ ] Saturated in Upper 12 Inches
- [ ] Water Marks
- [ ] Drift Lines
- [ ] Sediment Deposits
- [x] Drainage Patterns in Wetlands (lower)

Secondary Indicators (2 or more Required):

- [ ] Oxidized Root Channels in Upper 12 Inches
- [ ] Water-Stained Leaves
- [ ] Local Soil Survey Data
- [ ] FAC-Neutral Test
- [ ] Other (Explain in Remarks)

Wetland hydrology present? [x] Yes [ ] No

Rationale for decision/remarks:

X:\x_env_permit\Permit Templates\Wetland Delineation Info\Wetland_data_form (3-01).doc

SOILS Plot ID:

Map Unit Name (Series and Phase) : Altamont Clay

Drainage Class

Field observations confirm mapped type? ☐ Yes ☐ No

Taxonomy (subgroup)

Profile Description

Depth (inches)	Horizon	Matrix color (Munsell moist)	Mottle colors (Munsell moist)	Mottle abundance size and contrast	Texture, concretions, structure, etc.	Drawing of soil profile (match description)
10	A	10YR 3/2	—	—		

Hydric Soil Indicators: (check all that apply)

- ☐ Histosol
- ☐ Histic Epipedon
- ☐ Sulfidic Odor
- ☐ Aquic Moisture Regime
- ☐ Reducing Conditions
- ☐ Gleyed or Low-Chroma (=1) matrix
- ☐ Matrix chroma ≤ 2 with mottles
- ☐ Mg or Fe Concretions
- ☐ High Organic Content in Surface Layer of Sandy Soils
- ☐ Organic Streaking in Sandy Soils
- ☐ Listed on National/Local Hydric Soils List
- ☐ Other (explain in remarks)

Hydric soils present? ☐ **Yes** ☒ **No**

Rationale for decision/Remarks: no mottling

Wetland Determination

Hydrophytic vegetation present?	☐ **Yes**	☒ **No**
Hydric soils present?	☐ **Yes**	☒ **No**
Wetland hydrology present?	☒ **Yes**	☐ **No**
Is the sampling point within a wetland?	☐ **Yes**	☐ **No**

Rationale/Remarks:

NOTES: The site is a low drainage area that runs to a larger drainage ditch

alkali scald

Revised 3/01

APPENDIX H2

NATURAL DIVERSITY DATA BASE SURVEY FORMS

California Natural Community Field Survey Form

Mail to:
Natural Diversity Data Base
California Dept. of Fish and Game
1416 Ninth Street
Sacramento, CA 95914
(916) 324-6857

For office use only
Source Code_____ Quad Code_____
Community Code _____ Occ #_____
Map Index #_____ Update Y _____ N _____

Please provide as much of the following information as you can. Please attach a map (if possible, based on the USGS 7.5 minute series) showing the site's location and boundaries. Use the back if needed.

Community name: Northern Claypan Vernal Pool

Reporter: Jonathan Stead Phone (510) 874-1780
Affiliation and Address URS Corp, 500 12th St. suite 200, Oakland, CA 94607
Date of field work: March-June, 2001 County:
Location (**Please attach/submit map**): located between the Glenn-Colusa Canal and the PG&E Compressor Station

Quad name: Sites 7.5' T18N R4W ___ ¼ of ___ ¼ sec 36 Meridian
UTM Zone ___ Northing 4358000 Easting 564000
Landowner/Manager: Photographs: Slide ☐ Print ☒
Elevation: 130 feet Aspect: Slope (indicate % or °) Drainage:
Site acreage: Evidence of disturbance/threats: some evidence that herbicides may be draining from the PG&E compressor Station into the vernal pool; heavy grazing
Current land use: Cattle grazing
Substrate/Soils:

General description of community: alkaline vernal pool complex surrounded by annual grasslands, rice fields & PG&E Compressor Station. Some mima-mound topography present

Any Special Plants or Animals present: California ground squirrels, clam shrimp, gopher snakes observed in area on map; burrowing owl and horned lark observed in immediate vicinity but not in area on map

Successional status/Evidence of regeneration of dominant taxa:

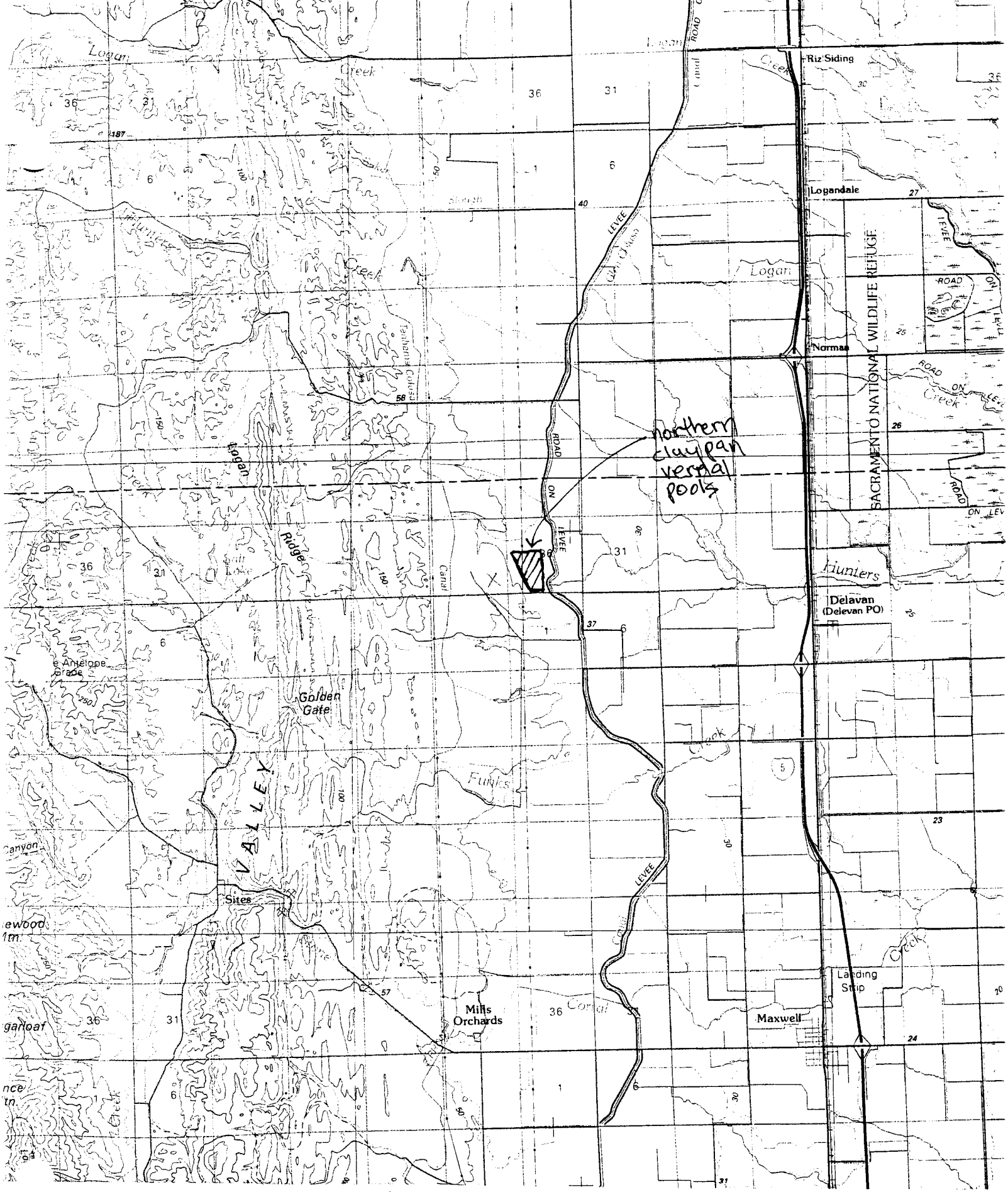
Overall site quality: Excellent___ Good ___Fair X Poor ___Comments:

Basis for report: Remote image ___Binocular/Telescopic survey
Windshield survey ___ Brief walk-thru X Detailed survey ___ Other
Relevé: In the space below, indicate each species cover % within the following growth form categories:

Trees	Shrubs	Herbs/Graminoids
		Callitriche marginata Deschampsia danthoniodes Downingia insignis Eryngium vaseyi Gratiola heterosepala Juncus bufonius Lasthenia fremontii Lilaea scilloides Limnanthes douglasii

Continue on back if needed. Thank you for your contribution.

Trees	Shrubs	Herbs/Graminoids
		Lythrum hyssopifolium Pilularia americana Pogogyne zizyphoroides Psilocarphus brevissimus Tillaea aquatica



From Lakeport 1:100,000 USGS topo

California Native Species Field Survey Form

Mail to:
Natural Diversity Database
California Department of Fish and Game
1416 Ninth Street, 12th Floor
Sacramento, CA 95814

Date of Field Work: 5 (month) - 10 (day) - 2001 (year)

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Scientific Name: Athene cunicularia hypugea

Common Name: western burrowing owl

Species Found? ☒ yes ☐ no _____ If not, why?
Total No. Individuals 2 owls Subsequent Visit? ☒ yes ☐ no
Is this an existing NDDB occurrence? _____ Yes, Occ. # ☒ no ☐ unk.
Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Jonathan Stead
Address: URS Corp, 500 12th St Suite 200, Oakland, CA 94607
Phone: (510) 874-1780

Plant Information
Phenology: _____ % vegetative _____ % flowering _____ % fruiting

Animal Information
Age Structure: 2 # adults _____ # juveniles _____ # unknown
☒ breeding ☐ wintering ☒ burrow site ☐ rookery ☒ nesting ☐ other

Location ***(please also attach or draw map on back)***
burrows located just west of the PG&E Compressor Station

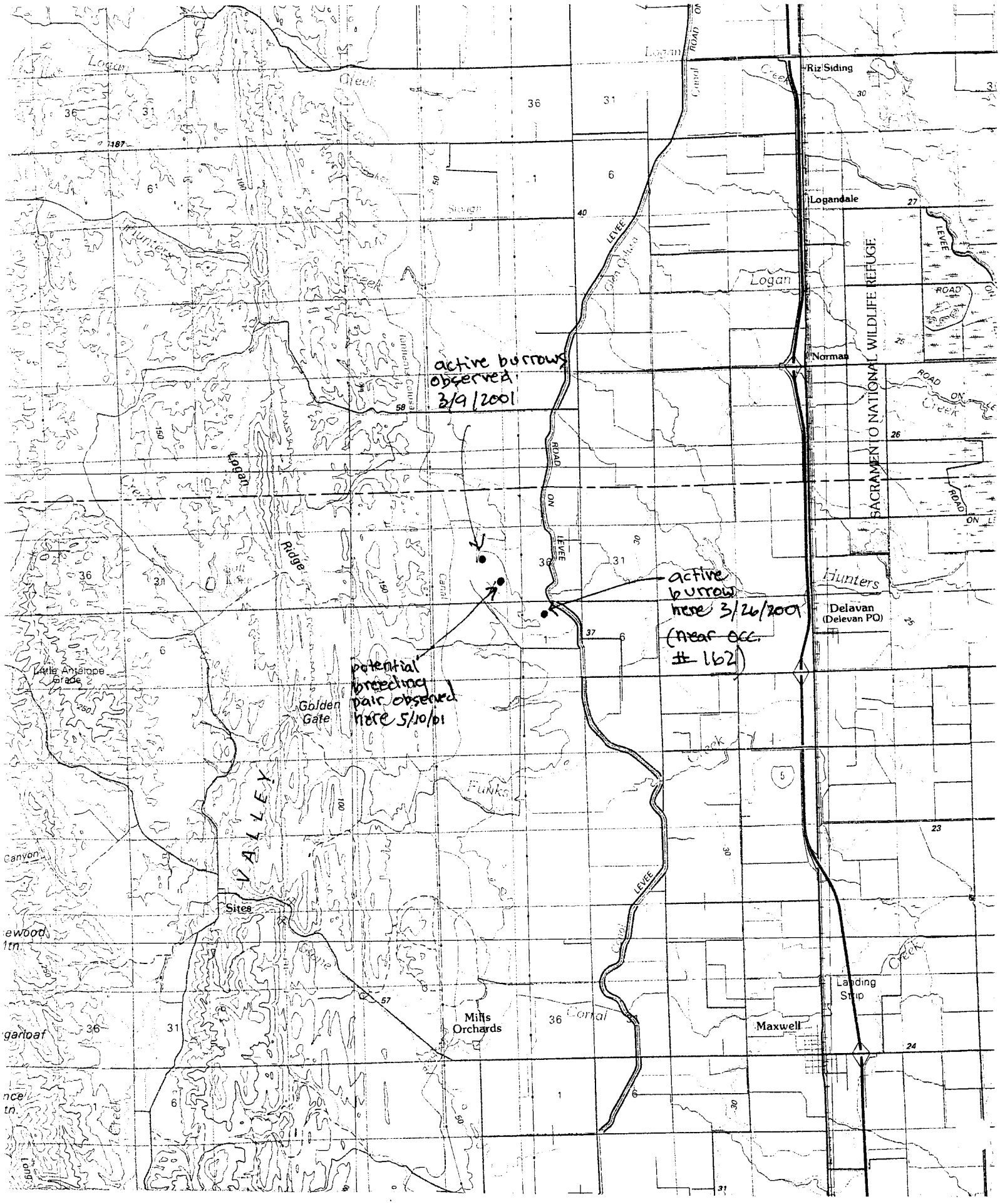
County: Colusa Landowner / Mgr.: _____
Quad Name: Sites 7.5' USGS Elevation: 190 feet
T 18N R 4W NE 1/4 of SE 1/4 of Section 35 T ____ R ____ ____ 1/4 of ____ 1/4 of Section ____
UTM: Zone: 10 (10, 11) Datum: _____ (NAD83, NAD27, WG584, other)
Source: USGS 7.5' Quad (GPS, map & type, etc.) GPS Accuracy Point: (circle one) <80m <150m <300m
UTM Coordinates 4358000 N 564000 E

Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope)*
rolling hills, annual grassland habitat at transition between Valley floor and low Coast Range foothills. dominant plant species include Centaurea solstialis, Taeniatherum caput-medusae, Avena spp., Bromus diandrus, Erodium botrys and Geranium dissectum. Two owls observed occupying burrows (2 entrances) likely dug by coyotes. Based on time of observation and behavior of owls, assumed to be a breeding pair.
Other rare species? horned larks in vicinity

Site Information Overall site quality: ☐ Excellent ☒ Good ☐ Fair ☐ Poor
Current / surrounding land use: cattle grazing, next to PG&E Compressor Station
Visible disturbances / possible threats: development of a proposed power plant
Comments: Other active burrows observed in vicinity during spring 2001, including 1 burrow in T17N, R4W, section 1 (previously documented occ. #162) and a few active burrows in same section (35), SW¼ of NE¼ of section 35.

...rmination: *(check one or more, and fill in blanks)*
____ Keyed (cite reference): _____
____ Compared with specimen housed at: _____
____ Compared with photo / drawing in: _____
X By another person (name): Corinna Gu & Jonathan Stead
X Other: recognized from past experience

Photographs: *(check one or more)* Slide Print
Plant / animal ____ ____
Habitat ____ X
Diagnostic feature ____ ____
May we obtain duplicates at our expense? ☒ yes ☐ no



From Lakeport 1:100,000 USGS Topo

California Native Species Field Survey Form

Mail to:
Natural Diversity Database
California Department of Fish and Game
1416 Ninth Street, 12th Floor
Sacramento, CA 95814

Date of Field Work: 5 (month) - 10 (day) - 2001 (year)

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Scientific Name: Eremophila alpestris
Common Name: California horned lark

Species Found? [X] yes [ ] no _____ If not, why?
Total No. Individuals ~10 Subsequent Visit? [X] yes [ ] no
Is this an existing NDDB occurrence? _____ Yes, Occ. # [X] no [ ] unk.
Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Jonathan Stead
Address: URS Corp, 500 12th St Suite 200, Oakland, CA 94607
Phone: (510) 874-1780

Plant Information
Phenology: _____ % vegetative _____ % flowering _____ % fruiting

Animal Information
Age Structure: 10 # adults _____ # juveniles _____ # unknown
likely breeding [ ] wintering [ ] burrow site [ ] rookery likely nesting [ ] other

Location ***(please also attach or draw map on back)***
horned larks observed north and west of PG&E Compressor Station, at various locations in the eastern 1/2 of section 35

County: Colusa Landowner / Mgr.: _____
Quad Name: Sites 7.5' USGS Elevation: _____
T 18N R 4W _____ 1/4 of _____ 1/4 of Section 35 T _____ R _____ _____ 1/4 of _____ 1/4 of Section _____
UTM: Zone: 10 (10, 11) Datum: _____ (NAD83, NAD27, WG584, other)
Source: USGS 7.5' Quad (GPS, map & type, etc.) GPS Accuracy Point: (circle one) <80m <150m <300m
UTM Coordinates 4358000N 564000E

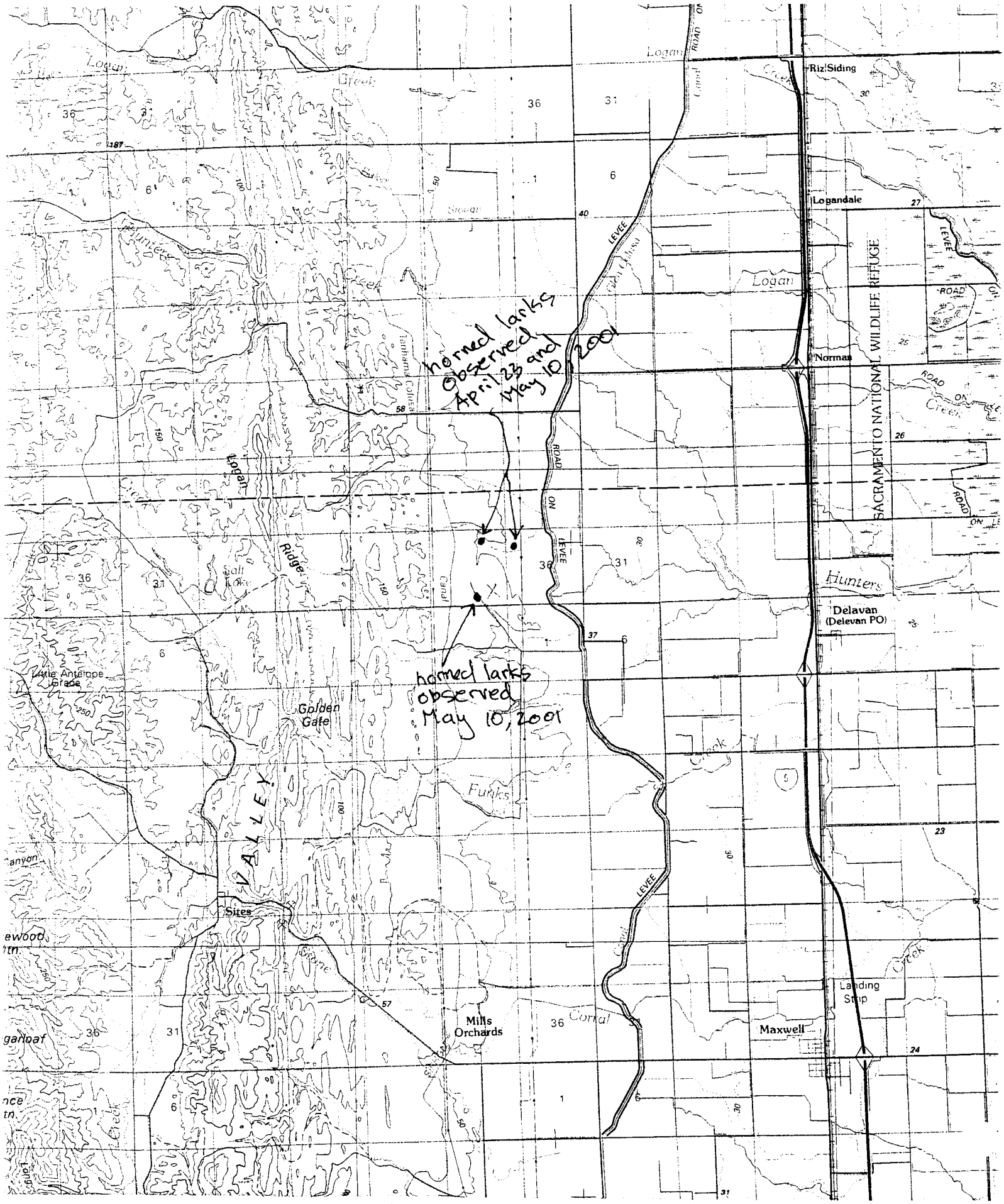
Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope)*
horned larks mostly observed in more alkali portions of annual grasslands in low rolling hills and flats of transition area between valley floor and low Coast Range foothills. Plant species found in the alkali portions of the annual grasslands include Aegilops triuncialis, Atriplex fruticulosa, Crassula sp., Cressa truxillensis, Erodium botrys, Plantago coronopus, Spergularia rubra and Trifolium hirtum.

Other rare species? burrowing owl in immediate vicinity

Site Information Overall site quality: [ ] Excellent [X] Good [ ] Fair [ ] Poor
Current / surrounding land use: grazing cattle, next to PG&E Compressor Station
Visible disturbances / possible threats: potential habitat loss due to proposed power plant
Comments: multiple observations, no nest observations, but based on time of observations, horned larks may be breeding here

Determination: *(check one or more, and fill in blanks)*
[X] Keyed (cite reference): Stokes Field Guide to Birds: Western Region
[ ] Compared with specimen housed at: _____
[ ] Compared with photo / drawing in: _____
[X] By another person (name): Corinna Gu & Jonathan Stead
[ ] Other _____

Photographs: *(check one or more)* Slide Print
Plant / animal [ ] [ ]
Habitat [ ] [X]
Diagnostic feature [ ] [ ]
May we obtain duplicates at our expense? [X] yes [ ] no



From Lakeport 1:100,000 USGS Topo

California Native Species Field Survey Form

Mail to:
Natural Diversity Database
California Department of Fish and Game
1416 Ninth Street, 12th Floor
Sacramento, CA 95814

Date of Field Work: 5 (month) - 10 (day) - 2001 (year)

For Office Use Only
Source Code _____ Quad Code _____
Elm Code _____ Occ. No. _____
EO Index No. _____ Map Index No. _____

Scientific Name: Plegadis chihi

Common Name: White-faced ibis

Species Found? ☒ yes ☐ no _____ If not, why?
Total No. Individuals ~200 Subsequent Visit? ☒ yes ☐ no
Is this an existing NDDB occurrence? _____ Yes, Occ. # ☒ no ☐ unk.
Collection? If yes: _____ Number _____ Museum / Herbarium

Reporter: Jonathan Stead
Address: URS Corp, 500 12th St. Suite 200, Oakland, CA 94607
Phone: (510) 874-1780

Plant Information
Phenology: _____ % vegetative _____ % flowering _____ % fruiting

Animal Information
Age Structure: 200 # adults _____ # juveniles _____ # unknown
☐ breeding ☐ wintering ☐ burrow site ☐ rookery ☐ nesting ☒ other

Location *(please also attach or draw map on back)*
~200 white-faced ibis observed foraging over a 2 day period in flooded rice fd immediately north of Dirks Rd, where it intersects McDermott Rd, in southern 1/2 of section 31 and sw corner of section 32.
County: Colusa Landowner / Mgr.: _____
Quad Name: Maxwell 7.5' USGS Elevation: _____
T 18N R 3W ____ 1/4 of ____ 1/4 of Section 31 T 18N R 3W ____ 1/4 of ____ 1/4 of Section 32
UTM: Zone: 10 (10, 11) Datum: _____ (NAD83, NAD27, WGS84, other)
Source: USGS 7.5' Quad (GPS, map & type, etc.) GPS Accuracy Point: (circle one) <80m <150m <300m
UTM Coordinates _____

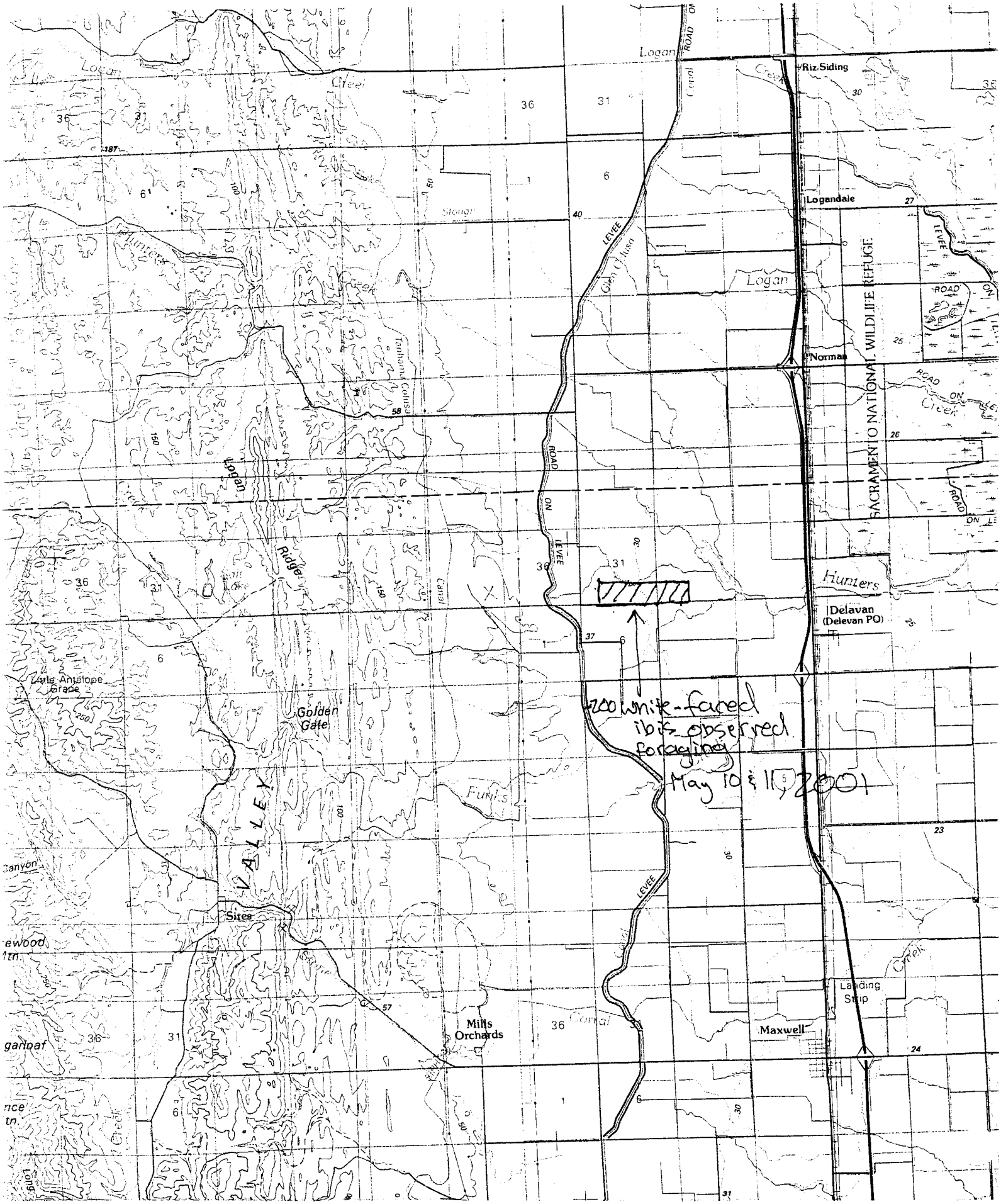
Habitat Description *(plant communities, dominants, associates, substrates/soils, aspects/slope)*
birds observed foraging in same place for over 2 day period. habitat consists of artificially flooded rice fields.

Other rare species?

Site Information Overall site quality: ☐ Excellent ☐ Good ☐ Fair ☒ Poor
Current / surrounding land use: rice farming, wheat farming
Visible disturbances / possible threats:
Comments:

Determination: *(check one or more, and fill in blanks)*
X Keyed (cite reference): Stokes field guide to birds, Western region
___ Compared with specimen housed at: _____
___ Compared with photo / drawing in: _____
X By another person (name): Corinna Lu & Jonathan Stead
X Other: [illegible]

Photographs: *(check one or more)* Slide Print
Plant / animal ___ ___
Habitat ___ ___
Diagnostic feature ___ ___
May we obtain duplicates at our expense? ☐ yes ☐ no



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